Remarks

Claims 1-52 are pending. Claims 5-15, 17, 18, 21-27, 29, 31, 35, and 37-52 have been withdrawn. Therefore, Claims 1-4, 16, 19, 20, 28, 30, 32-34, and 36 are under consideration. Claims 1, 19, 32, 33, 34, and 36 are amended herein to recite that the antigen-specific T-cells are CD8 T-cells. Support for the amendments to Claims 1, 19, 32, 33, 34, and 36 can be found throughout the specification and at least on page 1, lines 10-18; page 20, line 15 through page 28, line 12; and Figures 1-6 where antigen specific CD8 T cells expressing VLA-1 are discussed. Applicants respectfully point out that these amendments are narrowing amendments and thus all aspects of the claims as presently amended were subject to search and already under consideration. Therefore, Applicants believe that no new matter was introduced nor new issues raised by these amendments.

Interview Summary

Applicants would like to thank Examiner Humphey's for her helpful comments and suggestions in the telephonic interview conducted on May 24, 2011. During the interview Applicants' representative and the Examiner discussed the outstanding obviousness rejection and strategies for addressing the rejection.

35 U.S.C 103

Claim 1-4, 16, 19, 20, 28, 30, 32-34, and 36 are rejected under 35 U.S.C. 103 as allegedly being obvious over Braun et al. (2003) *Cytometry Part B (Clinical Cytometry)* 54B: 19-27 in view of Novak et al. (1999) *J. Clinical Investigation* 104: R63-R67. Applicants respectfully traverse the rejection.

In the recent KSR Int'l Co. v Teleflex, Inc. ruling, the Supreme Court has reaffirmed the *Graham* factors for determination of obvious under 35 U.S.C. 103(a). *KSR Int 'l Co. v. Teleflex, Inc. (KSR),* No 04-1350 (U.S. Apr. 30, 2007). The three factual inquiries under *Graham* require examination of: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art. *Graham v. John Deere (Graham),* 383 U.S. 1, 17-18, 149 USPQ 459, 467 (1966). Additionally, the court in Graham noted a fourth consideration for the determination of obviousness would be any

objective evidence of secondary considerations such as unexpected results, unmet need in the art, and commercial success.

Furthermore, in order to establish a prima facie case of obviousness, the examiner has the initial burden of supporting the conclusion of non-obviousness. In particular, the Examiner has the initial burden of ascertaining the differences between the claims and the prior art which requires interpreting both the art and the claims as a whole. Put another way, "all words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Thus, the cited art must still be able to account for all the limitations of the claims otherwise a single reference teaching a single aspect of a claim without further disclosure or knowledge in the art would be able to render a claim obvious and subsequently render all innovation moot. Applicants assert that it is this important consideration that has not been met with respect to the previously amended claims and in particular the presently amended claims. In fact, no combination of the art cited in the present action can account for all the limitations of the currently amended claims.

Applicants respectfully point out that as presently amended, for reasons of record, the claims as previously amended were not obvious. However, in an effort to further prosecution, Claims 1, 19, 32, 33, 34, and 36 were amended to recite that the antigen-specific T cells are CD8 T cells. Applicants respectfully point out that, as amended, the cited art alone or in combination fails to teach or suggest that the presence of VLA-1+ antigen specific CD8 positive T cells is indicative of an efficacious immune response. The Examiner asserts that Braun et al. "discloses a method of assessing the activity and analyzing surface receptor expression of CD4+ T cells." Applicants respectfully point out that while Applicants believe that the Examiner is confusing a subtle yet important distinction between the previous version of the claims and the prior art with respect to CD4 cells, the Examiner's arguments at best are only relevant to CD4+ T cells and are not pertinent at all to the claims as presently amended. Applicants respectfully point out that nowhere in either Braun or Novak are VLA-1+ antigen specific CD8+ T cells disclosed. Because there is no teaching alone or in combination of the cited art of the existence of VLA-1+ antigen specific CD8+ T cells, there can be no further discussion or suggestion that the presence of VLA-1+ antigen specific CD8 T cells can be used as a marker for efficacy. Because all the limitations of the claims are not taught or suggested by the cited art alone or in combination, the

claims are not obvious. For this reason alone the claims are not obvious. Applicants believe this rejection to be overcome and respectfully request its withdrawal.

Pursuant to the above amendments and remarks, reconsideration and allowance of the pending application is believed to be warranted. The Examiner is invited and encouraged to directly contact the undersigned if such contact may enhance the efficient prosecution of this application to issue.

A Credit Card Payment authorizing payment in the amount of $960.00 which includes $555.00 the small entity fee under 37 C.F.R. § 1.17(a)(3) for a three (3) month extension of time and $405.00 the small entity fee under 37 C.F.R. § 1.17(e) for a Request for Continued Examination; a Request for a three (3) month Extension of Time; and a Request for Continued Examination are being submitted electronically. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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CERTIFICATE OF EFS-WEB TRANSMISSION UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence, including any items indicated as attached or included, is being transmitted by EFS-WEB on the date indicated below.

/J. Gibson Lanier, Ph.D., 57,519/ — May 24, 2011
J. Gibson Lanier, Ph.D. — Date